

Remarks

Claims 1-18 are pending in the application. Claims 1, 6-8, 10, 12-13, and 15-18 have been amended. Claims 11 and 14 have been cancelled. Reconsideration and re-examination of the application is respectfully requested for the reasons set forth herein.

1. The Examiner has objected to claim 15, because claim 15 depends from a method claim but recites limitations drawn towards an electrical cable. Claim 15 has been amended to be drawn from the method of claim 14. In view the amendment, removal of the objection to claim 15 is respectfully requested.

2. The Examiner has rejected claims 16-18 under 35 U.S.C. 102(e) as being anticipated by Beaman et al. (US Patent No. 6,380,485).

In regard to claim 16, the Examiner stated that Beaman et al. discloses an electrical cable terminal part comprising an electrical cable 10 having a signal drain wire 15 and differential transmission signal wires 13, 14 with a differential impedance. The electrical cable 10 has a stripped end 11, 12 that exposes an outer surface of the wires. A tube 16 is positioned over a portion of the electrical cable 10 and a portion of the outer surface of the wires 13, 14, 15 that maintains the differential impedance of the wires 13, 14, 15 having an exposed outer surface.

Claim 16 has been amended to state that a tube positioned over a portion of the electrical cable and a portion of the outer surface of the wires that maintains the differential impedance of the wires having an exposed outer surface, the tube positioned such that front end portions of the differential transmission signal wires are receivable on a first side of a circuit board and a front end portion of the drain wire is receivable on a second side of the circuit board. Beaman et al.

teaches a twinax wire 40 comprising two parallel copper signal wires 41, 42, a bare copper wire or drain wire 46 located between the two insulated signal conductors 41, 42, and a thin metalized shield 45 surrounding the two parallel copper signal conductors 41, 42 and the drain wire 46. A portion of the metalized shield 45 of the twinax wire 40 is stripped to expose the drain wire 46 and insulation 43, 44 covering the two copper signal wires 41, 42. A metal termination clip 50 is attached to the twinax wire 40. The termination clip 50 has a slot 51 for receiving the stripped drain wire 46 at a right angle to the axis of the stripped copper signal wires 41, 42. The drain wire 46 is received in a slot 97 on a grounding bar 95, and the copper signal wires 41, 42 are arranged on terminal pads 95 on a small printed circuit card 90. Unlike the claimed invention, Beaman et al. does not teach positioning the tube such that front end portions of the copper signal wires 41, 42 are receivable on a first side of a circuit board and a front end portion of the drain wire 46 is receivable on a second side of the circuit board. Beaman et al., therefore, does not teach all of the elements of amended claim 16. Removal of the rejection of claim 16 under 35 U.S.C. 102(e) is respectfully requested.

Claims 17 and 18 depend from independent claim 16. Claim 18 has been amended to remove claim limitations now contained in amended claim 16. As previously discussed, Beaman et al. does not teach all of the elements of amended claim 16. Because Beaman et al. does not teach all of the elements of claim 16, Beaman et al. does not teach all of the elements of claims 17 and 18. Removal of the rejection of claims 17 and 18 under 35 U.S.C. 102(e) is respectfully requested.

2. The Examiner has rejected claims 1-15 under 35 U.S.C. 103(a) as being unpatentable over Beaman et al. (US Patent No. 6,380,485 B1) in view of Selmeski (US Patent No. 5,371,322).

In regard to claims 1-5 and 7-13, the Examiner stated that Beaman et al. discloses an electrical cable terminal part comprising an electrical cable 10 having a signal drain wire 15 and differential transmission signal wires 13, 14 with a differential impedance. The electrical cable 10 has a stripped end 11, 12 that exposes an outer surface of the wires. A tube 16 is positioned over a portion of the electrical cable 10 and a portion of the outer surface of the wires 13, 14, 15 that maintains the differential impedance of the wires 13, 14, 15 having an exposed outer surface. Beaman et al., however, does not disclose the tubing being a heat-shrink tube covering. The Examiner further stated that Selmeski teaches a heat-shrink tubing for securing wires together. The Examiner, therefore, concluded that it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the tubing of Beaman et al. with a heat-shrink tube as taught by Selmeski to secure the wires together more tightly.

Claim 1 has been amended to state that a heat-shrink tube covering a portion of the shielding covering and exposed area, except for a front end portion of the differential transmission signal wires and the drain wire, so that the equal distances between the differential transmission signal wires and the drain wire inside the shielding covering are maintained in the exposed area by the heat-shrink tube and the differential transmission signal wires and the drain wire are positioned for receipt on a circuit board such that the front end portions of the differential transmission signal wires are receivable on a first side of the circuit board and the front end portion of the drain wire is receivable on a second side of the circuit board. Beaman et al. teaches a twinax wire 40 comprising two parallel copper signal wires 41, 42, a bare copper

wire or drain wire 46 located between the two insulated signal conductors 41, 42, and a thin metalized shield 45 surrounding the two parallel copper signal conductors 41, 42 and the drain wire 46. A portion of the metalized shield 45 of the twinax wire 40 is stripped to expose the drain wire 46 and insulation 43, 44 covering the two copper signal wires 41, 42. A metal termination clip 50 is attached to the twinax wire 40. The termination clip 50 has a slot 51 for receiving the stripped drain wire 46 at a right angle to the axis of the stripped copper signal wires 41, 42. The drain wire 46 is received in a slot 97 on a grounding bar 95, and the copper signal wires 41, 42 are arranged on terminal pads 95 on a small printed circuit card 90. Unlike the claimed invention, neither Beaman et al. or Selemski teaches positioning the tube such that front end portions of the copper signal wires 41, 42 are receivable on a first side of a circuit board and a front end portion of the drain wire 46 is receivable on a second side of the circuit board. Selemski teaches coupling ends of two severed wires together with a heat shrink tube. Unlike the claimed invention, neither Beaman et al. or Selemski teaches positioning a heat-shrink tube such that front end portions of the signal wires are receivable on a first side of a circuit board and a front end portion of the drain wire is receivable on a second side of the circuit board. Because the combination of Beaman et al. in view of Selmeski neither teaches nor suggests all of the elements of amended claim 1, removal of the rejection of claim 1 is respectfully requested.

Claims 2-5 and 7-10, 12-13 depend from independent claim 1. As previously discussed, the combination of Beaman et al. in view of Selmeski neither teaches nor suggests all of the elements of claim 1. Because the combination of Beaman et al. in view of Selmeski neither teaches nor suggests all of the elements of claim 1, the combination of Beaman et al. in view of Selmeski neither teaches nor suggests all of the elements of claims 2-5 and 7-10, 12-13. Removal of the rejection of claims 2-5 and 7-10, 12-13 is respectfully requested.

Claim 11 has been cancelled for containing subject matter now included in amended claim 1. The rejection of claim 11, therefore, is moot.

In regard to claims 6 and 14-15, the Examiner stated that the method is inherent to the device.

Claim 6 has been amended to include the limitation of attaching the front end portions of the differential transmission signal wires on a first side of a circuit board and the front end portion of the drain wire on a second side of the circuit board. Beaman et al. teaches a twinax wire 40 comprising two parallel copper signal wires 41, 42, a bare copper wire or drain wire 46 located between the two insulated signal conductors 41, 42, and a thin metalized shield 45 surrounding the two parallel copper signal conductors 41, 42 and the drain wire 46. A portion of the metalized shield 45 of the twinax wire 40 is stripped to expose the drain wire 46 and insulation 43, 44 covering the two copper signal wires 41, 42. A metal termination clip 50 is attached to the twinax wire 40. The termination clip 50 has a slot 51 for receiving the stripped drain wire 46 at a right angle to the axis of the stripped copper signal wires 41, 42. The drain wire 46 is received in a slot 97 on a grounding bar 95, and the copper signal wires 41, 42 are arranged on terminal pads 95 on a small printed circuit card 90. Unlike the claimed invention, neither Beaman et al. or Selemski teaches positioning the tube such that front end portions of the copper signal wires 41, 42 are receivable on a first side of a circuit board and a front end portion of the drain wire 46 is receivable on a second side of the circuit board. Selemski teaches coupling ends of two severed wires together with a heat shrink tube. Unlike the claimed invention, neither Beaman et al. or Selemski teaches attaching front end portions of the signal wires on a first side of a circuit board and a front end portion of the drain wire on a second side of the circuit board. Because the combination of Beaman et al. in view of Selmeski does not

teach or suggest all of the elements of amended claim 6, removal of the rejection of claim 6 is respectfully requested.

Claim 14 has been cancelled for containing subject matter now included in amended claim 4. The rejection of claim 14, therefore, is moot.

Claim 15 has been amended to depend from independent claim 6. As previously discussed, the combination of Beaman et al. in view of Selmeski neither teaches nor suggests all of the elements of claim 6. Because the combination of Beaman et al. in view of Selmeski neither teaches nor suggests all of the elements of claim 6, the combination of Beaman et al. in view of Selmeski neither teaches nor suggests all of the elements of claim 15. Removal of the rejection of claims 15 is respectfully requested.

3. Claims 1, 6-8, 10, 12 and 14-17 have been amended to correct typographical errors and antecedent basis. Approval by the Examiner of these corrections is respectfully requested.

In view of the arguments and amendments presented herein, the application is considered to be in condition for allowance. Reconsideration and passage to issue is respectfully requested.

Please charge any additional fees associated with this application to Deposit Order Account No. 501581.

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